



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,550	02/27/2002	Kazuhito Rokutan	ASAM.0051	5577
38327	7590	05/02/2007		
REED SMITH LLP			EXAMINER	
3110 FAIRVIEW PARK DRIVE, SUITE 1400			DEJONG, ERIC S	
FALLS CHURCH, VA 22042				
			ART UNIT	PAPER NUMBER
			1631	
			MAIL DATE	DELIVERY MODE
			05/02/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/083,550

Applicant(s)

ROKUTAN ET AL.

Examiner

Eric S. DeJong

Art Unit

1631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-11 is/are pending in the application.
- 4a) Of the above claim(s) 2-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date 20070424.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED OFFICE ACTION

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/01/2006 has been entered.

Claims 2-11 are pending in the instant application. Claims 1 and 12 have been canceled. Claims 2-10 are withdrawn. Claim 11 is currently under examination.

### ***Claim Objections***

Claim 11 objected to because of the following informalities:

Claim 11 recites "complementary sequence to said genes" in line 4 and should amended to read as --complementary sequences to said genes--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 recites "An oligonucleotide array comprising an array of multiple oligonucleotides with different base sequence fixed onto known and separate substrate positions, wherein said oligonucleotides are only biological stress related genes or complementary sequences to said genes" in lines 1-4 of said claim. This causes the metes and bounds of the claim to be indefinite because the it is unclear if the claimed oligonucleotide array "comprising" an array of multiple oligonucleotides may further comprise nucleotide sequences other than said multiple oligonucleotides or, alternatively, if the claimed oligonucleotide array excludes the incorporation of nucleic acid sequences other than said multiple oligonucleotides.

For the purpose of continuing examination, the limitation of "An oligonucleotide array comprising an array of multiple oligonucleotides... wherein said oligonucleotides are only biological stress related genes or complementary sequences to said genes" has been construed such that only biological stress related genes or complementary sequences to said genes are fixed onto a substrate, wherein any other nucleic acid sequences are excluded from the instantly claimed array. For the benefit of applicants,

Art Unit: 1631

an amendment to the instant claim to recite --consisting of-- in place of "comprising" in line 1 of claim 11 would be sufficient to overcome the instant rejection.

***Claim Rejections - 35 USC § 102***

The rejection of claim 11 as being anticipated by Lipshutz et al. in light of Smith et al. is withdrawn in view of amendments made to the instant claims.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Chenchik et al. (WO 98/53103, see IDS filed 12/15/2004).

The instant claim is drawn to an oligonucleotide array consisting of an array of multiple oligonucleotides with different base sequences fixed onto known and separate positions on a support substrate. Said multiple oligonucleotides are limited to biological stress related genes or complementary sequences of said genes. Further, the multiple oligonucleotides are classified according to their gene functions wherein the support substrate has fixation regions divided according to said classification.

Chenchik et al. discloses arrays of polynucleotides and related methods for their preparation and use (see Chenchik et al., Abstract). The disclosed arrays are taught as having a plurality of polynucleotide spots stably associated with the surface of a solid

Art Unit: 1631

support (see ChenChik et al., page 6, lines 16 and 17). Each spot on an array comprises a polynucleotide probe of known identity (see ChenChik et al., page 6, lines 17-19). Chenchik et al. further teaches that the spots may be arranged in any convenient pattern across or over the surface of the array (see Chenchick et al., page 6, lines 23-27). The substrate of the array comprises at least one surface on which a pattern of spots may is present, wherein the surface may comprise from about 10 to 5,000 distinct spots of distinct probes (see Chenchik et al., page 6, line 28 through page 7, line 8 and page 8, lines 5-30), which reads on an array of multiple oligonucleotides with different base sequence fixed onto known and separate substrate positions as instantly claimed. Chenchik et al. further sets forth that a critical feature of the arrays is that the polynucleotide spots on an array are made up of polynucleotide probes that all correspond to the same type or kind of gene, i.e. that all genes share some common characteristic or can be grouped together based on some common feature (see especially, Chenchik et al. page 9, lines 11-17), which reads on multiple oligonucleotides with different base sequences fixed onto known and separate positions on said support substrate as well as multiple oligonucleotides classified according to gene function as instantly claimed. Chenchik et al. further teaches that arrays will be of a specific type and further provides specific examples of representative type that include human stress arrays and mouse stress arrays (see Chenchik et al., page 9, lines 24-29), which reads on multiple oligonucleotides that are only biologically stress related genes or complementary sequences to said gene as instantly claimed.

Art Unit: 1631

Chenchik et al. also discloses a human stress array wherein all of the unique polynucleotide probe compositions correspond to genes that are associated with stress responses of human cells (see Chenchik et al., page 87). Further, Table 5 sets forth a description and associated activity of all biopolymers sequences used in the polynucleotide spots of a human stress array, which fairly reads on the classification of gene functions (1)-(9) as set forth in lines 7-14 of claim 11. As described above, each distinct spot on the arrays disclosed by Chenchik et al. comprises distinct a polynucleotide probe of known identity arranged on the surface of the array. Therefore, the human stress array comprising a spots on the disclosed human stress array as set forth by Chenchik et al. reads on a support substrate that has fixation regions divided according to the classification of gene functions as recited in claim 11.

### ***Response to Arguments***

Applicant's arguments, filed 09/01/2006, with respect to claim 11 have been considered but are moot in view of the new grounds of rejection.

### ***Conclusion***

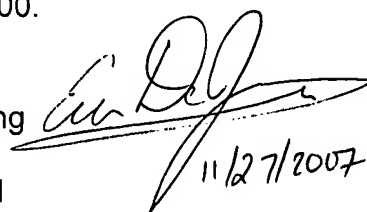
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric S. DeJong whose telephone number is (571) 272-6099. The examiner can normally be reached on 8:30AM-5:00PM.

Art Unit: 1631

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shukla Ram can be reached on (571) 272-0735. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Eric S DeJong  
Examiner  
Art Unit 1631



11/27/2007